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TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NO.  11001.077 U.S. APPLICATION NO. <b>09/889111</b>
INTERNATIONAL APPLICATION NO. PCT/FI00/00012	INTERNATIONAL FILING DATE 10 January 2000	PRIORITY DATE CLAIMED 13 January 1999
TITLE OF INVENTION Method For Storing And Handling A Roll In A Paper Machine, Including A Roll Box		
APPLICANT(S) FOR DO/EO/US Esa Vilmusenaho		

Applicant herewith submits to the United States Designated Elected Office (DO/EO/US) the following items and other information.

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☐ This express request to begin national examination procedures (U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in U.S.C. 371(b) and PCT Articles 22 and 39
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority.
5. ☒ A copy of the International Application as filed (35 U.S.C. 37(c)(2))
  - a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau)
  - b. ☒ has been transmitted by the International Bureau
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US)
6. ☐ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
  - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☐ have been transmitted by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☐ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☒ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).

**Items 11. to 16. below concern other document(s) or information included:**

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☒ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A **FIRST** preliminary amendment.  
☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☐ Other items or information:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
UNDER THE PATENT COOPERATION TREATY BEFORE THE  
UNITED STATES DESIGNATED/ELECTED OFFICES

In regard to international application:

Serial No. PCT/FI00/00012  
Applicants: Esa Vilmusenaho  
Filing Date: January 10, 2000  
Title: METHOD FOR STORING AND HANDLING A ROLL IN A  
PAPER MACHINE, INCLUDING A ROLL BOX  
Attorney Docket No. 11001.077  
To: Assistant Commissioner for Patents  
Washington, D.C. 20231

I hereby certify that this correspondence is being deposited with the United States Postal Service as express mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on

July 9, 2001  
Date of Deposit

Christopher J. Fildes  
Registered Attorney

  
Signature

PRELIMINARY AMENDMENT

Sir:

In connection with entry into the National Phase in the United States of the above referenced application, please amend the application as follows:

In the Specification:

- P. 1, line 4, insert the heading -- Technical Field --;  
P. 1, line 12, insert the heading -- Background of the Invention --;  
P. 2, line 22, insert the heading -- Summary of the Invention --;  
P. 2, line 29, delete "The characteristic features of ... Claims." and insert -- A method for storing and handling a roll of a paper machine, board machine, or finishing machine, in which

method a special base is arranged for the roll, for moving the roll from its operating location to a roll store and/or to a means of transportation, or for storing the roll in the store, is characterized in that the base is made into a roll box, inside of which suitable heat and humidity conditions are arranged for the roll, which are maintained when using such a room or area as the roll store, in which the heat and humidity conditions are either poorly regulated or not regulated at all.

The roll box may be equipped with wheels and moveable by being pushed and/or pulled by a transport vehicle, such as a forklift truck.

The roll box, is intended to protect a roll during storage and transportation, and includes a base with a detachable or raisable cover fitted to it, and devices for securing the roll to the base. The roll box includes devices for maintaining suitable heat and humidity conditions in the roll box for the roll.

The equipment may include air-conditioning equipment and its monitoring and control equipment, and insulation fitted to the base and/or the cover and essentially covers the entire roll box.

The roll box may include support wheels at least one end of the base, the axis of rotation of which is arranged essentially transversely to the roll box, and connecting devices at the other end of the base to allow the roll box to be handled by a transport vehicle, such as a forklift truck. The support wheels may be arranged within the external dimensions of the roll box in the transverse direction. A second set of support wheels may be arranged, in addition to the connecting devices, at the aforesaid other end of the base. A power source and steering devices may be connected to the second set of support wheels.

The method may include equipment for identifying, positioning, and/or servicing the roll.

A method of storing one or more rolls for a paper machine, board machine, or finishing machine, includes:

containing each roll in a moveable carrier having an environmentally controllable interior;

storing said contained roll at a location in the vicinity of an operating location; and

transporting a said contained roll as needed to the operating location;

whereby said roll is stored without investment in a warehouse and a gantry crane. --;

P. 3, line 14, insert the heading -- Brief Description of the Drawings --;

P. 3, line 24, insert the heading -- Detailed Description of the Invention --;

P. 8, line 35, insert the paragraph -- Although the invention has been described by reference to specific embodiments, it should be understood that numerous changes may be made within the spirit and scope of the inventive concepts described. Accordingly, it is intended that the invention not be limited to the described embodiments, but that it have the full scope defined by the language of the following claims. --;

#### **In the Claims:**

Amend claims 1-10 and add claim 11 as follows:

1. (Amended) A method for storing and handling a roll of a paper machine, board machine, or finishing machine, in which method a special base is arranged for the roll [(13)], for moving the roll [(13)] from its operating location to a roll store [(20)] and/or to a means of transportation [(23)], or for storing the roll [(13)] in the store [(20)], [characterized] characterized in that the base is made into a roll box [(10)], inside of which suitable heat and humidity conditions are arranged for the roll [(13)], which are maintained when using such a room or area as the roll store [(20)],

in which the heat and humidity conditions are either poorly regulated or not regulated at all.

2. (Amended) A method according to Claim 1, [characterized] characterized in that the roll box (10) is equipped with wheels (15) and the roll box (10) is moved by being pushed and/or pulled by a transport vehicle, such as a forklift truck (22).

3. (Amended) A roll box, which is intended to protect a roll [(13)] of a paper machine, board machine, or finishing machine during storage and transportation, and which roll box [(10)] includes a base [(11)] with a detachable or raisable cover [(12)] fitted to it, and devices [(14, 14')] for securing the roll [(13)] to the base [(11)], [characterized] characterized in that the roll box [(10)] includes devices [(17)] for maintaining suitable heat and humidity conditions in the roll box [(10)] for the roll [(13)].

4. (Amended) A roll box according to Claim 3, [characterized] characterized in that the equipment [(17)] includes air-conditioning equipment and its monitoring and control equipment, when the roll box [(10)] is closed to be airtight.

5. (Amended) A roll box according to Claim 3 [or 4], [characterized] characterized in that insulation [(18)] is fitted to the base [(11)] and/or the cover [(12)] and essentially covers the entire roll box [(10)].

6. (Amended) A roll box according to one of Claim[s] 3 [- 5], [characterized] characterized in that the roll box [(10)] further includes support wheels [(15)] at least one end of the base [(11)], the axis of rotation of which is arranged essentially transversely to the roll box [(10)], and that there are connecting devices [(16)] at the other end of the base [(11)] to allow the roll box [(10)] to be handled by a transport vehicle, such as a forklift truck [(22)].

7. (Amended) A roll box according to Claim 6, [characterized]  
characterized in that the support wheels [(15)] are arranged within  
the external dimensions of the roll box [(10)] in the transverse  
direction.

8. (Amended) A roll box according to Claim 6, [characterized]  
characterized in that a second set of support wheels are arranged,  
in addition to the connecting devices [(16)], at the aforesaid  
other end of the base [(11)].

9. (Amended) A roll box according to Claim 8, [characterized]  
characterized in that a power source and steering devices are  
connected to the second set of support wheels.

10. (Amended) A method according to [one of] Claim[s] 3 [- 9],  
[characterized] characterized in that the roll box [(10)] includes  
equipment for identifying, positioning, and/or servicing the roll  
[(13)].

11. (New) A method of storing one or more rolls for a paper  
machine, board machine, or finishing machine, the method  
comprising:

containing each roll in a moveable carrier having an  
environmentally controllable interior;

storing said contained roll at a location in the vicinity of  
an operating location; and

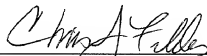
transporting a said contained roll as needed to the operating  
location;

whereby said roll is stored without investment in a warehouse  
and a gantry crane.

In the Abstract:

Insert the Abstract being provided on a separate sheet.

Respectfully submitted,  
Esa Vilmusenaho  
Fildes & Outland, P.C.



Christopher J. Fildes, Attorney  
Registration No. 32,132  
20916 Mack Avenue, Suite 2  
Grosse Pointe Woods, MI 48236  
(313) 885-1500

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METHOD FOR STORING AND HANDLING A ROLL IN A PAPER  
MACHINE, INCLUDING A ROLL BOX

Abstract

5 A method for storing and handling a roll of a  
paper machine, board machine, or finishing machine  
includes using a special base arranged for the roll on  
which the roll is moveable from its operating location  
to a roll store and/or to a transport, or for storing  
the roll in the store. The base is made into a roll box  
10 inside of which suitable heat and humidity conditions  
are arranged for the roll. The conditions are  
maintained when using such a base or area as the roll  
store.



09/889111

METHOD FOR STORING AND HANDLING A ROLL IN A PAPER MACHINE,  
INCLUDING A ROLL BOX.

5 The present invention relates to a method for storing and  
handling a roll of a paper machine, board machine, or finishing  
machine, in which method a special base is arranged for the  
roll, for moving the roll from its operating location to a roll  
store and/or to a means of transportation, or for storing the  
10 roll in the roll store. The invention also relates to a roll  
box for use in the method.

When a roll is removed from its operating location, it is  
generally stored on top of a base prepared for it. Usually, the  
15 roll is also secured on its base, so that the roll and the base  
can be moved together. When a roll is transported from the  
manufacturer to the operating location, and later from the  
operating location for servicing or renovation, structures are  
added around the base to form a box. Despite the box, however,  
20 the roll is subject to variations in temperature and humidity,  
so that the box can only be used during transportation. Even  
then, the roll suffers from variations in conditions, therefore  
an attempt is made to keep the roll in the box for as short a  
time as possible. This leads to a tight transport schedule and  
25 other special arrangements when handling the roll.

At the operating location, such as in a paper mill, there are  
generally spare rolls for the rolls being used in the machines.  
As the rolls used in paper machines, board machines, and  
30 finishing machines are large and heavy, a gantry crane is  
usually needed to move them. Spare rolls and other rolls that  
have been removed from their operating locations are stored in  
a special roll store, which usually has to be located close to  
the machine hall. This is because the roll store gantry crane  
35 transfers the roll to the machine hall gantry crane, which then

moves it to the machine. A gantry crane or some other sufficiently powerful crane is also required to load the roll onto a truck. The hoists on trucks cannot handle large and heavy rolls.

5 A general drawback when handling and storing present-day rolls is the acquisition and maintenance of special stores and equipment. The rolls demand a special roll store, which must be dimensioned according to the most demanding roll. The tempera-  
10 ture and humidity in the roll store must be constantly maintained at a suitable level for the roll. In practice, the roll store then becomes large, so that the maintenance of suitable conditions consumes a great deal of energy. In addition, the rolls can usually only be handled with a gantry crane, which  
15 must correspondingly be dimensioned according to the largest roll. However, the capacity utilization of the gantry crane remains very low, as rolls are changed relatively seldom. The unsatisfactory final result is a large and warm roll store, with a massive gantry crane. The loading of roll boxes onto  
20 various means of transportation is also one of the problematic aspects of the state of the art.

The invention is intended to create a method, by means of which a roll of a paper machine, board machine, or finishing machine  
25 can be handled and stored more easily and with the aid of simpler equipment. In addition, the invention is intended to create a roll box for use in the method, which can be used continuously, for both roll transportation and storage, without needing special buildings and handling equipment. The charac-  
30 teristic features of the invention appear in the accompanying Claims. The roll box according to the invention forms not only a transport base, but also a storage space. In addition, the roll box can be handled using many different kinds of equipment, which are general equipment at the place of use of rolls.  
35 As they can be easily moved, the rolls need not be stored close to the machine, allowing the location of the roll store to be

chosen freely. This also permits existing roll stores to be used more productively while the new stores need not be all in one place or heated. Each roll is stored in the roll box in suitable conditions. The roll box according to the invention suits all roll-like objects, but especially large and fragile rolls. The roll box does not represent a large investment, because even at present transportation bases are made for most new rolls and, in many cases, paper mills additionally purchase a separate box for transporting the roll.

In the following, the invention is described in detail with reference to the accompanying drawings illustrating some embodiments of the invention, in which

Figure 1 shows a roll box according to the invention seen from the side, with the roll and the cover raised,

Figure 2 shows an axonometric end view of the base of a roll box according to the invention and a roll secured to it,

Figure 3 shows a diagram of the various stages of the method according to the invention,

Figure 4 shows a side view of one manner of loading applying the method according to the invention.

Figure 1 shows a side view of a roll box according to the invention. In the rest of the disclosure, the roll box will be referred to more simply as a box. The box includes a base 11 and a cover 12 fitted to it. It may be possible to lift the cover 12 entirely, as shown in Figure 1, or it may be able to be moved to the side, or may be equipped with a top that can be opened. The roll 13 is preferably lifted onto and off base 11 using a gantry crane, which is generally available in machine halls and maintenance areas. In addition, base 11 has suitable devices 14 for securing roll 13.

Cover 12 preferably extends outside base 11, so that the box can be closed tightly. Various kinds of base have been previously used in the transportation of rolls, but the box 10 according to the invention preferably includes support wheels 15, at least at one end of the base 11. The support wheels 15 are arranged in such a way that the axis around which they rotate is set essentially transversely to box 10. In other words, box 10 can be moved on support wheels 15 in its longitudinal direction. In addition, there are connecting devices 16 at the other end of box, allowing the box to be handled by a transportation vehicle, such as a forklift truck 22. Thus, the movement of the box no longer requires a gantry crane. At the same time, the handling of the box becomes less restricted, as it is no longer dependent on the tracks of gantry cranes.

Unlike known boxes, box 10 according to the invention is also used to store roll 13. For this purpose, box 10 includes devices 17 for maintaining heat and humidity conditions within box 10 suitable for roll 13. Such a box may also include the support wheels and connecting devices referred to above, or may have none of these. In the latter case, the box is handled mainly by lifting, for example, using a gantry crane.

In order to stabilize the conditions to be suitable for the roll, the devices 17 includes air-conditioning equipment and monitoring and control equipment for it. In addition, insulation 18, which essentially covers the entire box 10, is fitted to the base 11, the cover, or both. Because the base carries the weight of the roll, the cover may be of a lightweight construction. It is preferable to use a sandwich method in its manufacture, so that the final result is a light, but nevertheless stiff cover. The cover is also manufactured and fitted to the base in such a way that the closed box is airtight. Thus, little energy is used to maintain the internal conditions in the airtight and insulated box. Even the shaping of the box can affect the energy economy of the box. A streamlined box has a

low air resistance. In addition, snow and water will immediately run off a suitably shaped cover.

During storage, box 10 is connected to the mains electricity  
5 and information networks with the aid of connecting cables 19.  
In all other respects, box 10 operates completely independently. As required, the air-conditioning device can either heat or cool the air inside the box while also maintaining the desired humidity. In addition, the air-conditioning device  
10 circulates the air, evening the temperature and humidity in the different parts of the box. The air-conditioning device can be installed to operate at a constant output, but preferably measuring and control devices can continually monitor and adjust the operation of the equipment, and thus the conditions  
15 inside the box. In this way, if problems arise, the box can be examined immediately, before the roll is damaged. During loading onto a vehicle, the box can easily be disconnected from the power supply, because large rolls in particular store a great deal of heat. Alternatively, the box can incorporate, for  
20 example electrical or thermal batteries, in case of power cuts. During transportation, the box is connected to the electrical system of the means of transport.

The box is intended to be handled by some transportation  
25 vehicle. Generally, there are numerous forklift trucks at the operating locations of rolls, with sufficient capacity to transport the box and the roll. After all, the support wheels carry at least half of the weight of the box. In their simplest form, the connecting devices are concavities formed in the  
30 base, into which the arms of the truck's fork fit and lock. Other types of connecting devices are also possible. In addition, the support wheels of the box are arranged transversely within the external dimensions of the box. Thus, the support wheels do not add to the overall dimensions of the box,  
35 which reduces the storage space needed. At the same time, the support wheels are protected and two large boxes can be loaded

side by side onto the means of transport, such as a truck with a semi or full trailer.

More highly developed embodiments may have not only connecting devices, but also a second set of support wheels (not shown) at the other end of the base. This allows the box to be handled by devices that have insufficient capacity to lift it. A power source and steering devices may also be attached to the aforesaid second set of support wheels. In such a case, the box can be handled without a separate transportation vehicle, so that in a sense the box is its own transportation vehicle.

Figure 2 shows base 11 with a roll 13 secured to it. The same reference numbers are used for the parts with a similar function. Roll 13 can be secured to base 11 in several different ways. For example, base 11 includes fixed supports 14', on which roll 13 is set, secured by its bearing journals. Another alternative is to secure the bearings directly to the base, when the roll can be rotated. This roll rotation, with the addition of oil-circulation lubrication, will keep the bearings in operating condition, so that the roll is ready for use immediately after installation. Certain rolls also demand rotation during storage. If necessary, the air-conditioning device can be used to raise the temperature of the roll to near to the operating temperature before installation. In addition, the storage space can act as a servicing base. The base can also be equipped with an electrically operated hydraulic hoist, which allows the bearing assemblies to be dismantled and installed. Similarly, the roll's documentation and service tools and spare parts travel in the box. In this case, for example, the bearings can be repaired and serviced practically anywhere. The box can also include accompanying memory and positioning devices, to identify the roll and determine its position at any time, and to record servicing information.

Figure 3 shows various ways of handling the box. The box is preferably transported in a horizontal position, with the aid of a traction device or forklift truck 22, from the machine hall to the roll store 20 and back (box A). According to the method, roll box 10 is equipped with wheels 15 and roll box 10 is moved by being pushed, pulled, or both by a transport vehicle, such as forklift truck 22. Thus, the roll store 20 can be freely located in the vicinity of the operating location, while a gantry crane is not needed in roll store 20. In the same way, the box is loaded from loading bay 21 onto a road-haulage vehicle or a train (box B). Short and light boxes can also be loaded sideways (box C).

According to the method, the base is made into a box. Thus, suitable heat and humidity conditions for the roll are created and maintained inside box 10. A box according to the invention can be adapted as a winter store in a covered or cold store area, in which there need not be a gantry crane. Generally, rooms or areas, in which the heat and humidity conditions are poorly regulated, or not regulated at all can be used as roll stores. Thus, in principle, the box can also be stored outdoors, but in that case the energy consumption of the air-conditioning equipment will probably increase. On the other hand, short-term storage outdoors has advantages when the roll is sent for servicing or surfacing. In that case, the loading and unloading of the box can be carried out independently by the transport crew, irrespective of whether a gantry crane is available. This increases the flexibility of logistics. An unheated store is a preferable place for the box with its roll, because the conditions are even throughout the year, and are not disturbed by rain and wind. Thus, for example, an empty end-product store is suitable as a roll store. As logistics become more efficient, end-product storage space is being released at mills, so that additional investments are not required for a special roll store.

Figure 4 shows box 10 being loaded onto a road-haulage vehicle. In Figure 4, the bed of semi-trailer 23 is arranged at the height of loading bay 21, when box 10 can be simply pushed by vehicle 23. This also permits the use of a covered trailer, as the box is loaded by pushing and not by lifting. At the same time, loading is speeded up, because it is not necessary to remove the cover of the load space. Lifting devices 24 according to the example are available for adjusting the height. Sufficient height adjustment can also be obtained by using the vehicle's air suspension.

In general, boxes are dimensioned taking the size of the means of transportation into account. In addition, standard securing devices (not shown) are fitted to the box, to secure it to the means of transport. So-called container locks are preferable as the securing devices. The roll is secured to the base by means of retaining devices that will withstand the stresses of loading and transportation. All that the transport crew must do is to secure the container to the vehicle. In addition to the securing devices, frameworks can be attached to the box, to allow boxes to be transported and stored on top of each other. It is preferable to use container locks with the frameworks too. In this case, a sufficiently powerful crane must be available.

A roll box according to the invention can be used to easily create a suitable storage solution for each roll, without investments in an expensive heated warehouse and a gantry crane. The solution permits the use of leasing or a similar flexible form of financing, releasing capital for more productive purposes. In addition, energy is saved, as the space to be heated is substantially reduced in comparison to a conventional store. The handling of the roll box also becomes easier and more flexible.



**CLAIMS**

1. A method for storing and handling a roll of a paper machine, board machine, or finishing machine, in which method a special  
5 base is arranged for the roll (13), for moving the roll (13) from its operating location to a roll store (20) and/or to a means of transportation (23), or for storing the roll (13) in the store (20), characterized in that the base is made into a roll box (10), inside of which suitable heat and humidity  
10 conditions are arranged for the roll (13), which are maintained when using such a room or area as the roll store (20), in which the heat and humidity conditions are either poorly regulated or not regulated at all.
- 15 2. A method according to Claim 1, characterized in that the roll box (10) is equipped with wheels (15) and the roll box (10) is moved by being pushed and/or pulled by a transport vehicle, such as a forklift truck (22).
- 20 3. A roll box, which is intended to protect a roll (13) of a paper machine, board machine, or finishing machine during storage and transportation, and which roll box (10) includes a base (11) with a detachable or raisable cover (12) fitted to it, and devices (14, 14') for securing the roll (13) to the  
25 base (11), characterized in that the roll box (10) includes devices (17) for maintaining suitable heat and humidity conditions in the roll box (10) for the roll (13).
4. A roll box according to Claim 3, characterized in that the  
30 equipment (17) includes air-conditioning equipment and its monitoring and control equipment, when the roll box (10) is closed to be airtight.
5. A roll box according to Claim 3 or 4, characterized in that  
35 insulation (18) is fitted to the base (11) and/or the cover (12) and essentially covers the entire roll box (10).

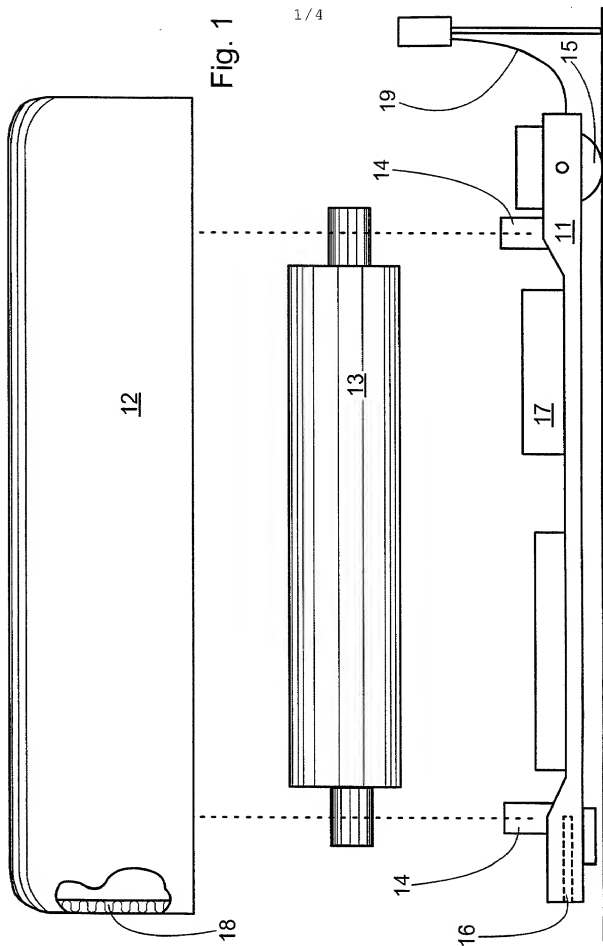
6. A roll box according to one of Claims 3 - 5, characterized in that the roll box (10) further includes support wheels (15) at least one end of the base (11), the axis of rotation of which is arranged essentially transversely to the roll box (10), and that there are connecting devices (16) at the other end of the base (11) to allow the roll box (10) to be handled by a transport vehicle, such as a forklift truck (22).

7. A roll box according to Claim 6, characterized in that the support wheels (15) are arranged within the external dimensions of the roll box (10) in the transverse direction.

8. A roll box according to Claim 6, characterized in that a second set of support wheels are arranged, in addition to the connecting devices (16), at the aforesaid other end of the base (11).

9. A roll box according to Claim 8, characterized in that a power source and steering devices are connected to the second set of support wheels.

10. A method according to one of Claims 3 - 9, characterized in that the roll box (10) includes equipment for identifying, positioning, and/or servicing the roll (13).



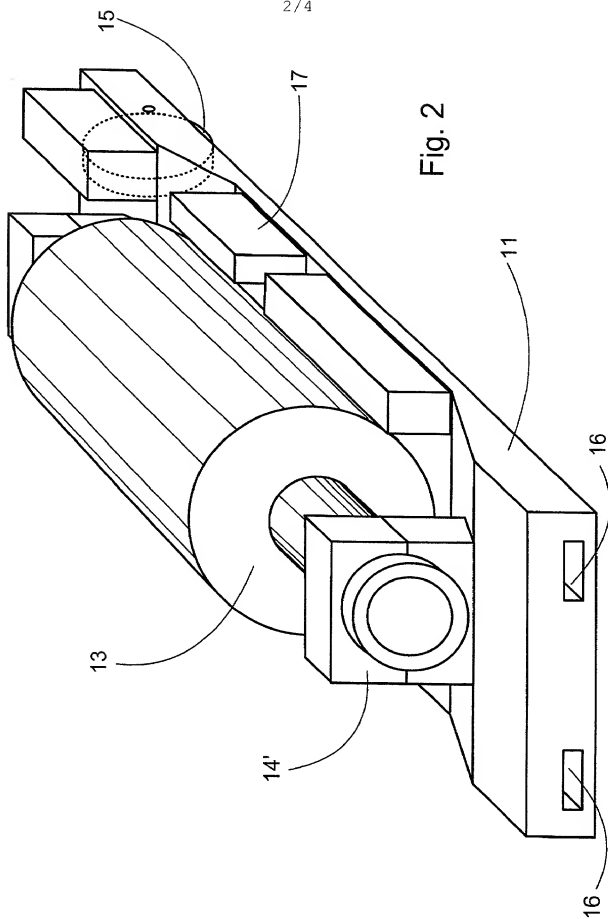


Fig. 2

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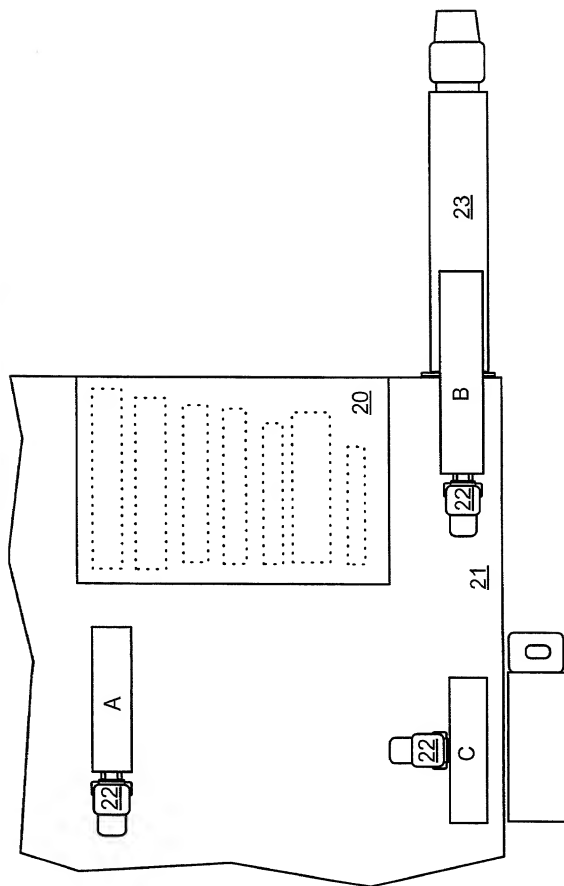


Fig. 3

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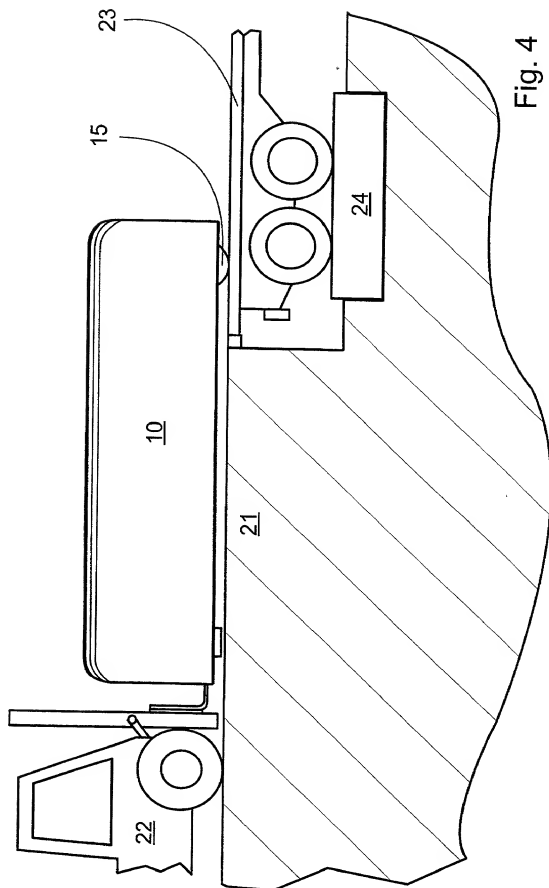


Fig. 4

## DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:  
My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled Method for Storing and Handling a Roll in a Paper Machine, Including a Roll Box, the specification of which

(check one) ☒ is attached hereto.

☐ was filed on \_\_\_\_\_; as Application Serial No. \_\_\_\_\_  
and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s):

Priority Claimed

<u>US990013</u>	<u>Finland</u>	<u>13/01/99</u>	Yes
(Number)	(Country)	(Day/Month/Year Filed)	
<u> </u>	<u> </u>	<u> </u>	
(Number)	(Country)	(Day/Month/Year Filed)	

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

<u>PCT/FI00/00012</u>	<u>10/01/00</u>	(Status - patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	
<u> </u>	<u> </u>	(Status - patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Christopher J. Fildes, Reg. No. 32,132; Robert J. Outland, Reg. No. 22,197  
Edward P. Barthel, Reg. No. 20,717

Address all correspondence and telephone calls to Christopher J. Fildes  
Fildes & Outland, P.C., 20916 Mack Avenue, Suite 2, Grosse Pointe Woods, Michigan 48236 - (313) 885-1500

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Esa Viljusenaho  
Inventor's signature [Signature] Date 25 June 2001  
Post Office Address Same as residence Citizenship Finland  
Residence Riihimäentie 14, FIN-40520 Jyväskylä, Finland FIX

Full name of second joint inventor, if any \_\_\_\_\_  
Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_  
Post Office Address \_\_\_\_\_ Citizenship \_\_\_\_\_  
Residence \_\_\_\_\_